

Claims

1. A method for supporting vertically hanging electrical resistance elements (1) for heating furnaces or ovens in industrial operation, wherein each element comprises current conducting legs (6) that run downwards and upwards a number of times, wherein the element includes along its length a number of ceramic discs (8) that are provided with through-penetrating holes through which respective element legs extend, wherein the upper part of said element merges with terminals (5a, 5b) that are connected to a source of electric current, and wherein said element is supported by at least one of the uppermost discs, **c h a r a c t e r i s e d** in that the uppermost ceramic disc or the uppermost ceramic discs (10, 11) supporting said element is/are placed in the insulation (3) of the furnace roof (2) above the under side (15) of said roof; and in that legs (6) of the element are caused to be short circuited at a location slightly or somewhat beneath the underside (15) of said roof with the aid of short circuiting plates (7).  
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2. A method according to Claim 1, **c h a r a c t e r i s e d** by forming the legs (6) from FeCrAl.
3. A method according to Claim 1 or 2, **c h a r a c t e r i s e d** by forming the ceramic discs (8, 10, 11) from  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$  or mixtures thereof.  
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4. A method according to Claim 3, **c h a r a c t e r i s e d** by placing the supportive ceramic discs (10, 11) at two levels.
- 25 5. A method according to any one of the preceding Claims, **c h a r a c t e r i s e d** by placing the supportive ceramic discs (10, 11) above the upper side of the furnace roof (2).
6. An arrangement for supporting vertically hanging electrical resistance elements (1) for heating furnaces or ovens in industrial operation, wherein each element comprises current conducting legs (6) that run downwards and upwards a number of times, wherein the resistance element (1) includes along its length a number of ceramic discs (8) that are provided with through-penetrating holes through which respective element legs extend, wherein the upper part of said element merges with terminals (5a, 5b) that are connected to a source of electric current, and wherein said element is supported by at least one of the  
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uppermost of said ceramic discs, characterised in that the uppermost ceramic disc or the uppermost ceramic discs (10, 11) supporting said element is/are placed in the insulation (3) of the roof of the furnace (2) above the under side (15) of said roof; and in that relevant legs (6) of the element are caused to be short circuited at a location slightly or somewhat beneath the underside (15) of said roof with the aid of short circuiting plates (7).

- 5      7. An arrangement according to Claim 6, characterised in that the legs (6) are comprised of FeCrAl.
- 10     8. An arrangement according to Claim 6 or 7, characterised in that the ceramic discs (8, 10, 11) are comprised of  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$  or mixtures thereof.
- 15     9. An arrangement according to Claim 6, 7 or 8, characterised in that the supportive ceramic discs (10, 11) are situated at two levels.
10. An arrangement according to Claim 6, 7, 8 or 9, characterised in that the supportive ceramic discs (10, 11) are located above the upper side of the furnace roof (2).